

22. (Twice amended) The method of claim 19, wherein an oligonucleotide comprising SEQ ID NO: 3 is used to discriminate between or among Shigella and Escherichia.

23. (Twice amended) The method of claim 19, wherein an oligonucleotide comprising SEQ ID NO: 4 is used to discriminate between or among Shigella and Escherichia.

24. (Twice amended) The method of claim 19, wherein an oligonucleotide of RNA is used, wherein the oligonucleotide sequence comprises a sequence selected from the group consisting of SEQ. ID. Nos.: 1, 2, 3 and 4, and wherein U substitutes for T.

25. (Twice amended) A nucleic acid probe comprising the sequence of SEQ ID NO: 2 or 3, which distinguishes between species of Shigella in a hybridization assay, or distinguishes between Shigella and E. coli in a hybridization assay.

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sub h³

26. (Amended) A method for discriminating between species of Shigella and E. coli or for discriminating among species of Shigella and E. coli in a sample containing organisms of one or more taxonomic groups comprising:

- a. selecting an oligonucleotide having a sequence from a RNA operon, wherein the sequence differs by one or more bases from at least one of the operons from the two or more species being discriminated, and wherein the oligonucleotide discriminates between species after hybridization by the use of two or more wash temperatures at or above the oligonucleotide's calculated or experimentally determined T_m ;

- b. hybridizing the oligonucleotide to nucleic acid from the sample; and

- c. determining the presence or absence of hybridizing nucleic acid,

wherein said oligonucleotide comprises a sequence selected from the group consisting of SEQ ID NO: 1, SEQ ID NO: 2, SEQ ID NO: 3 and SEQ ID NO: 4.

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37. (Amended) A nucleic acid probe which consists of the sequence of SEQ ID NO: 1 which distinguishes between species of Shigella in a hybridization assay, or distinguishes between Shigella and E. coli in a hybridization assay.

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38. (Amended) The nucleic acid probe of claim 25, which comprises the sequence of SEQ ID NO: 2.

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40. (Amended) The nucleic acid probe of claim 25, which comprises the sequence of SEQ ID NO: 3.

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42. (Amended) A kit, comprising 3 probes, which are a probe which comprises the sequence of SEQ ID NO: 1, a probe which comprises the sequence of SEQ ID NO: 2, and a probe which comprises the sequence of SEQ ID NO: 3.

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44. (Amended) The kit of claim 42, further comprising a probe which comprises the sequence of SEQ ID NO: 4.

45. (Amended) The kit of claim 43, further comprising a probe which comprises the sequence of SEQ ID NO: 4.

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Please cancel claim 36 without prejudice or disclaimer.

REMARKS

Applicants thank the Examiner for the comprehensive telephonic interview on May 29, 2002. It is believed that the present claims, amended as suggested in the interview, are in condition for allowance.

The amendments to method claims 20-24 and 26; composition claims 25, 38 and 40 and kit claims 42, 44 and 45 serve to replace the language "consisting essentially of" and "consisting of" in certain locations with the word "comprising." These amendments broaden the scope of these claims.

Claim 25 has been amended to delete the recitation of SEQ. ID. NO. 1. Claim 36, which depends on claim 25 and recited SEQ. ID. NO. 1, has been canceled. These amendments are made in response to the Examiners allegation that a sequence known in the art, accession